UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SUBJECT: Blades Groundwater Superfund Site
PFAS Status Update and Recommended Approach for Additional Characterization

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TO: Will Geiger, Section Chief

DATE: April 14 2021

Summary

This memorandum outlines the current status of PFAS evaluations at the subject Site and provides recommendations concerning potential next steps after data validation results are received from the lab.

Background/Setting

- Blades Groundwater Superfund Site is a residential area in the Town of Blades, adjacent to Seaford Delaware, covering approximately 0.5 square miles. The majority of people within the Town of Blades municipal boundary are connected to the public water supply. Residents outside of the Town of Blades municipal boundary, downgradient of the groundwater suspected source area, have private well water supply.
- *Refer to Figure 2 for public water supply boundary.*
- Known releases at the Site included an active electroplating facility (Procino Enterprise) and a no-longer active electroplating facility that operated from 1992-1995 (Peninsula Plating).
    - Procino Plating is located at 901 Market Street in Blades. The Procino Plating facility property consists of 1.16 acres with generally flat topography and is primarily surrounded by residential properties. The facility has been an electroplating facility since the 1980s and has been operated as Procino Plating since 1996. Current operations at the facility consist of cutting and chrome-plating of griddle tops for restaurant use.
    - The Peninsula Plating facility was within the former Blades Commercial Complex located at the intersection of Market Street and River Road, which encompasses approximately 5.8 acres. The property formerly had six warehouse and storage buildings that were historically used for metal plating, vending, trash hauling operations, steel products, and bread distribution. The building that formerly contained the Peninsula Plating facility was located in the southwestern portion of the property, near the intersection of River Road and the Conrail line. There are currently no structures remaining on the property.
    - *Refer to Figure 1 for Location of the above electroplating facility.*
- As part of the Site Assessment investigation, prior to the Site being listed to the National Priority List (NPL), actions included the sampling of domestic water supply and the public water supply for PFOA/PFOS compounds.
    - The Town of Blades maintains three public supply wells **Ex. 9 Wells** **Ex. 9 Wells** DNREC, in coordination with EPA,

collected samples from the supply wells for PFAS in early February 2018. Results indicated each of the three public supply wells had PFOA/PFOS above the HAL of 70 ppt. A carbon filtration system was installed by DNREC on the Blades water supply on February 19, 2018.
    - DNREC continues to sample the public water supply on a quarterly basis to ensure the carbon filtration system's effectiveness.
  - Most residents within the Town of Blades municipal boundary are supplied with public water. However, residents outside of the Town of Blades municipal boundary are served by private wells. During February-April of 2018, EPA collected samples from approximately 54 domestic wells for PFAS analysis. Results showed 7 of these domestic wells exceeded the HAL of 70 ppt for PFOA/PFOS compounds. DNREC currently provides carbon filters to a total of 8 residents with private wells impacted by PFOA/PFOS above 52.5 ppt (75% of the HAL).
  - *Refer to Figure 2 for an image of the approximate areas private wells were sampled for PFOA/PFOS compounds.*
- Other activity during Site Assessment investigation included groundwater sampling that indicated PFOA/PFOS impacted groundwater at both Procino Enterprise and Peninsula plating, and in monitoring wells throughout the Site. Additional sampling of groundwater also included sampling for pesticides, total metals, cyanide, and hexavalent chromium. During the Site Assessment investigation private well water was not sampled for other contaminants of potential concern (COPC) besides PFOA/PFOS compounds.
- The Site was listed to the NPL on September 3rd, 2020.
- In March 2021, EPA's Removal program installed 3 monitoring wells (a shallow, intermediate, and deep well) on two different properties (6 wells total). These wells will be sampled for the same contaminants that will be sampled for in the upcoming remedial investigation to assist in determining Site related contaminants vs background.
- *Refer to Figure 4 for an approximate location of these background monitoring wells.*
- As part of the remedial investigation activities, the first action that will take place includes sampling domestic wells within the current zone of concern for PFOA/PFOS compounds similar to what was done during the Site Assessment investigation, and also sampling for other COPCs such as VOCs, SVOCs, 1,4-Dioxane, PCBs, Dioxins/Furans, TAL Metals, Hexavalent Chromium, and Water Quality Parameters. EPA will be reaching out to residents who have been sampled in the past, and additional residents.
  - The current zone of concern is the same zone of concern that was used during previous private domestic well sampling activities, but the COPCs that will be sampled for is being expanded outside of just PFOA/PFOS compounds.
  - During previous investigations, samples were taken indoors from the first available tap. Due to COVID-19 restrictions, samples during this investigation will be taken from the outdoor tap connected to the house, when available.
  - *Refer to Figure 3 for the current zone of concern.*
- As part of the remedial investigation, EPA will also take over the responsibility of sampling the public water supply on a quarterly basis, which the State has currently been conducting. Quarterly sample collection will be performed at three groundwater wells (one sample at each well), GAC filtration tank, treatment plant sink (distribution system drinking water tap). At each groundwater well, water quality parameters will be checked for stability and recorded. GAC tank samples will be collected from room Tank 75 valve (point of breakthrough). QA/QC samples will be collected. Water will be sampled and analyzed for a full suite of TAL inorganics, hexavalent chromium, TAL VOCs, SVOCs, PFAS, dioxins/furans and PCB congener compounds, however this suite maybe reduced later in the project as the COCs are refined.
  - The intent of sampling the public water supply is to ensure the GAC system continues to operate effectively.

- The frequency of the sampling may be further defined after sufficient data is obtained to determine the protectiveness of the GAC.
- Currently, EPA's remedial contractor is developing a QAPP for the sampling of private well water and the sampling of the public water supply as described above.
- Another QAPP will be developed, after this initial QAPP, for all other remedial investigation activities, which includes groundwater monitoring well installation/sampling, soil characterization, and surface water/sediment sampling. This evaluation will also include sampling for PFAS, after the evaluation of drinking water.

PFAS Evaluation Process and Findings

- R3 consulted with HQ (OSRTI) in July 2020 based on upcoming remedial investigation activities listed above and R3 received notification that this site qualifies for a streamlined PFAS consult and may proceed with sampling once ready.
- Additionally, PFAS sampling has already occurred during the Site Assessment investigation and it has been concluded there is an impact of PFAS to the drinking water supply and PFAS is prevalent at the Site.

Recommended Next Step

- As discussed above, the next steps are to sample private well domestic water supply for PFOA/PFAS compounds and other COPCs to ensure residents are not impacted by Site contamination. This sampling will occur at locations that have been sampled in the past, and additional locations not sampled in the past.
- Next steps are also to sample public water supply wells for PFOA/PFAS compounds and other COPCs to ensure the GAC system continues to operate effectively.

Ex. 5 Deliberative Process (DP)

- EPA will use up-to-date toxicity values and exposure parameters to evaluate the human health risk of exposure to the detected PFAS concentrations to determine if the human health exposure warrants and action by EPA.

- Additional remedial investigations will occur at a later date after the above investigation. This will include soil characterization of potential source area location, groundwater monitoring well sampling of existing monitoring wells and to install and sample new monitoring wells, and surface water/sediment sampling. These sampling activities would also include the evaluation of PFOA/PFOS compounds, among other COPCs.
- A 2nd consult will be conducted with OSRTI and OEM to discuss this proposed drinking water supply sampling, and to obtain their concurrence to proceed.

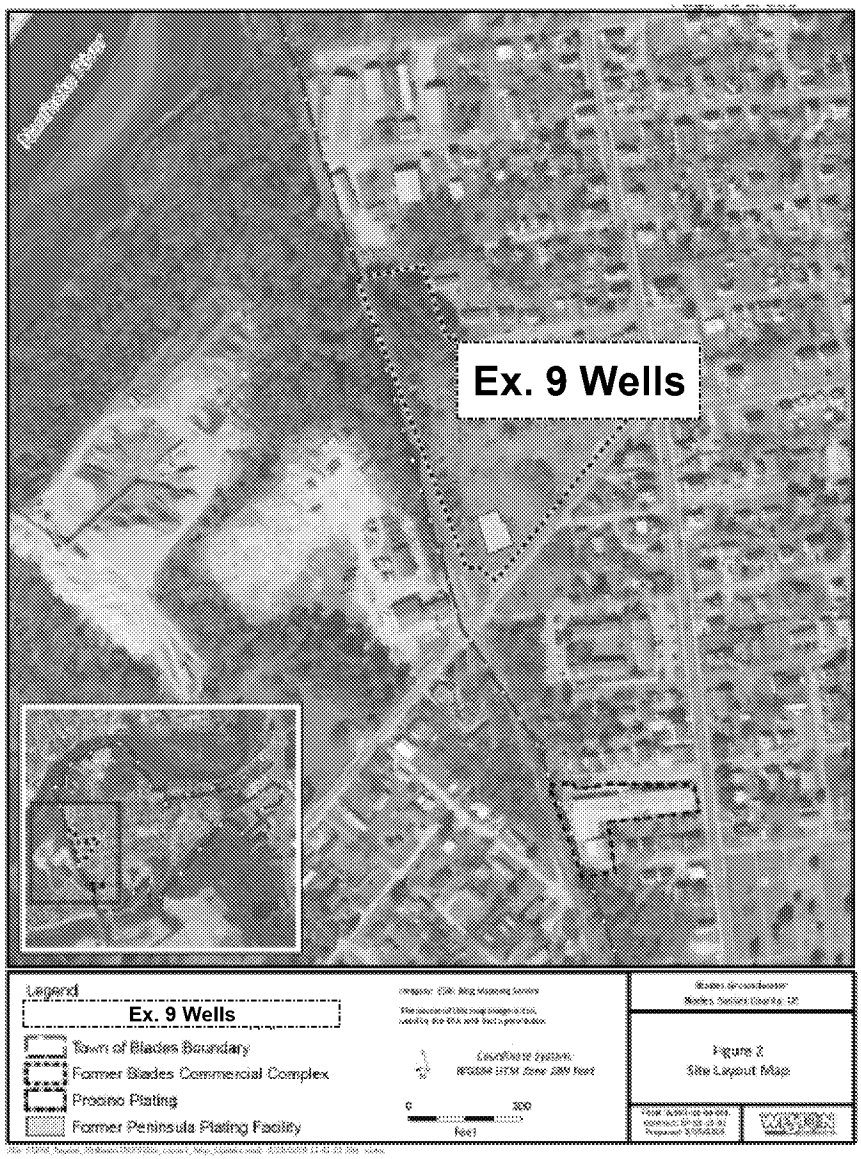

Figure 1: Location of Peninsula Plating and Procino Plating- from the Final Site Investigation Report

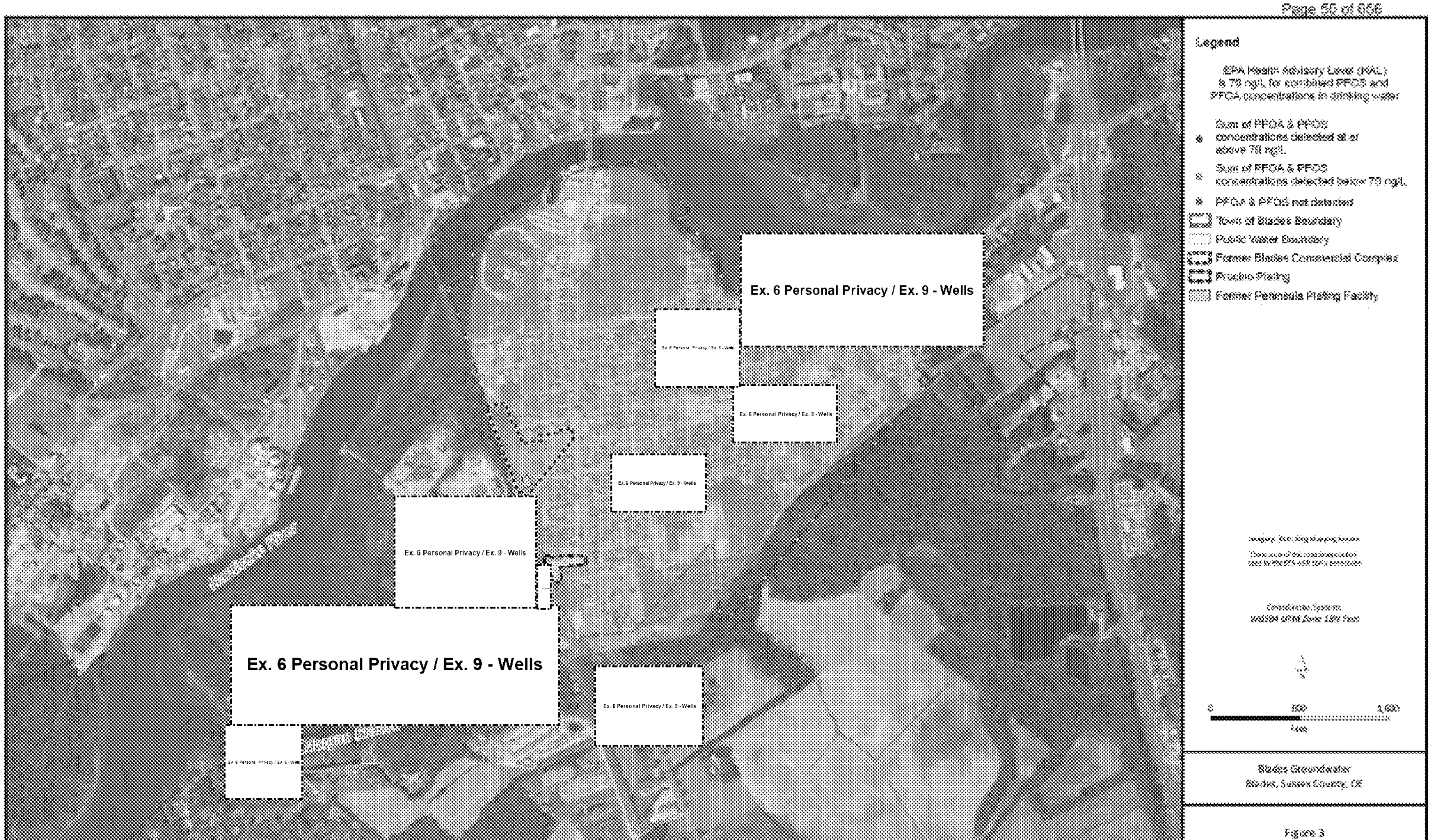

Figure 2: A **Ex. 6 Personal Privacy / Ex. 9 - Wells**

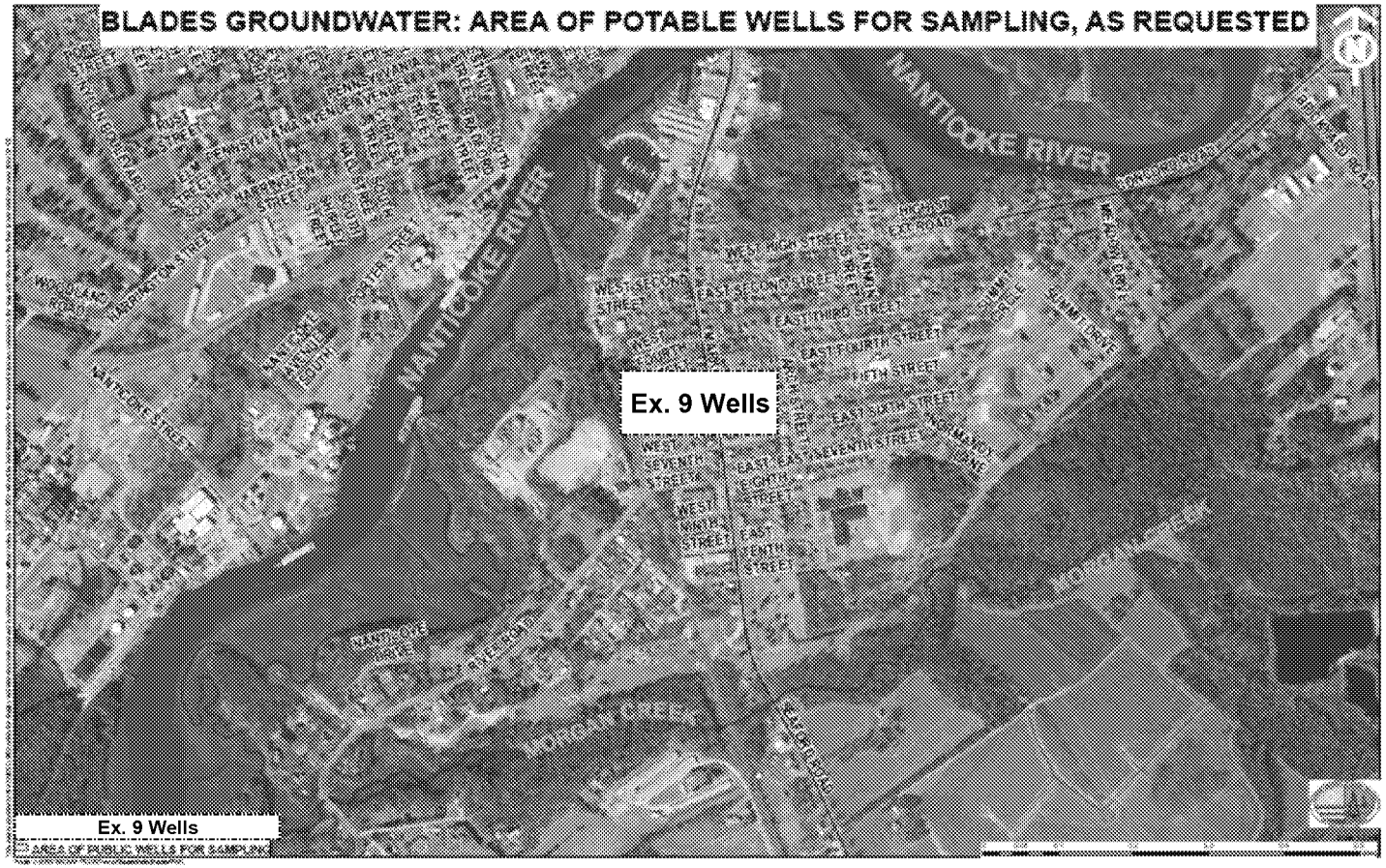

Figure 3: Zone of Concern Being Used for Upcoming Sampling Event

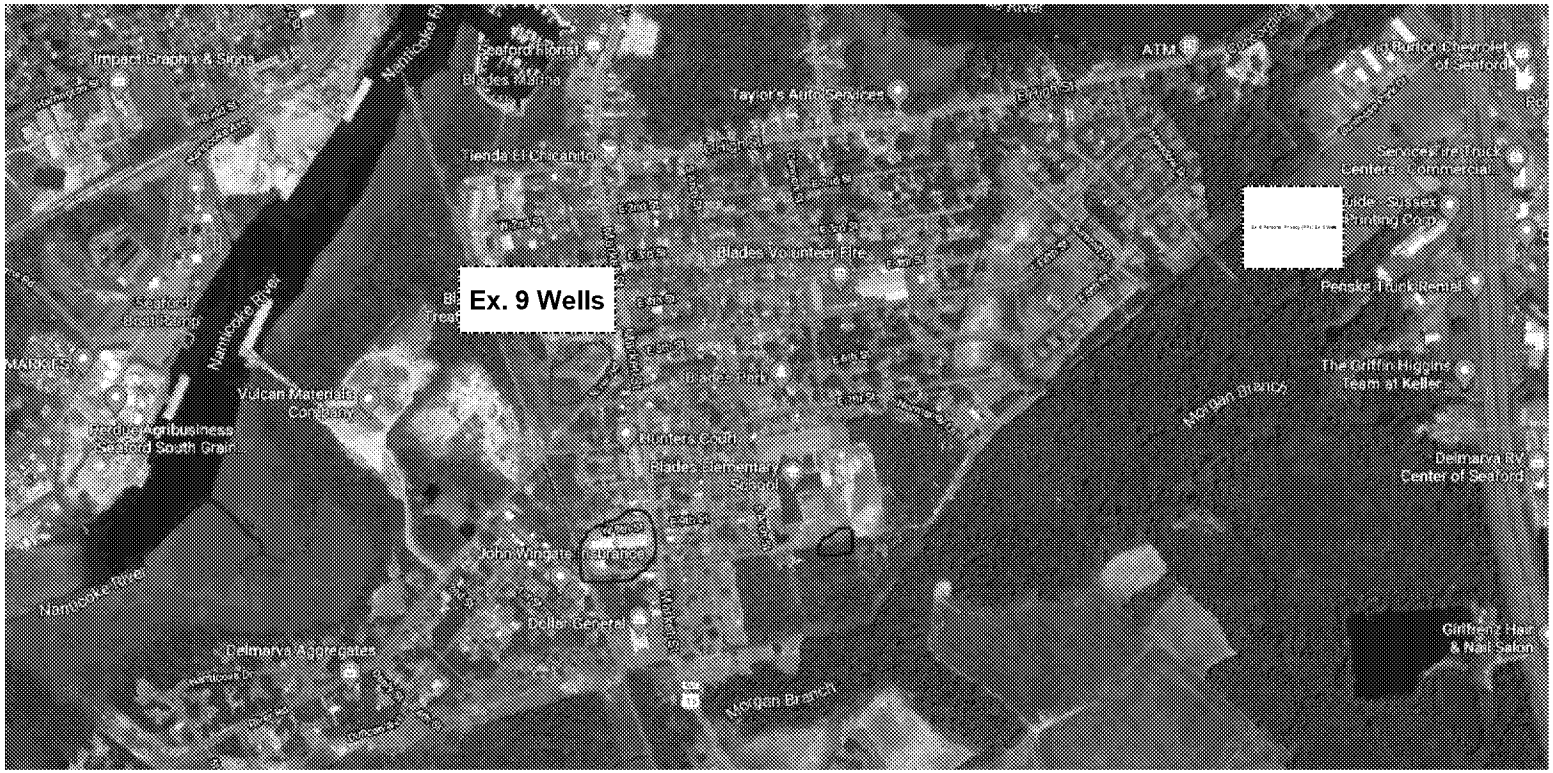

Figure 4: Locations of Background Monitoring Wells. Red Circle is Peninsula Plating. Blue Circle is Procino Enterprise. Black Circle is Three Background Monitoring Wells at the Blades Elementary School.

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